

IN THE CLAIMS

Please further amend claims 1, 5, and 6 as follows.

Claim 1 (Currently Amended): A method of cleaning a heat treatment apparatus ~~that deposits including a treatment vessel having therein quartz structures that are exposed to an SiO₂ film deposited by means of TEOS on an object to be processed contained in a the treatment vessel, the treatment vessel being~~ capable of forming a vacuum, the method comprising the step of:

~~cleaning the heat treatment apparatus by supplying a mixed gas of an HF gas and an NH₃ gas into the treatment vessel for while restraining damage to quartz material present in the quartz structures during said cleaning by limiting said cleaning to~~ a period of 0.6 minute or less.

Claim 2 (Original): The method of cleaning a heat treatment apparatus according to claim 1, wherein

 during the cleaning step, a temperature in the treatment vessel is in a range of from 100°C to 300°C.

Claim 3 (Original): The method of cleaning a heat treatment apparatus according to claim 1 or 2, wherein

 during the cleaning step, a pressure in the treatment vessel is equal to or more than 53200 Pa (400 Torr).

Claim 4 (Previously Presented): The method of cleaning a heat treatment apparatus according to claim 1 or 2, wherein

 during the cleaning step, a supply amount of the HF gas is equal to or more than a supply amount of the NH₃ gas.

Claim 5 (Currently Amended): A method of cleaning a heat treatment apparatus ~~that deposits including a treatment vessel having therein quartz structures that are exposed to an AsSG film deposited~~ by means of TEOS on an object to be processed contained in [[a]] ~~the treatment vessel, the treatment vessel being~~ capable of forming a vacuum, the method comprising the step of:

~~cleaning the heat treatment apparatus by supplying a mixed gas of an HF gas and an NH₃ gas into the treatment vessel for while restraining damage to quartz material present in the quartz structures during said cleaning by limiting said cleaning to~~ a period of 0.6 minute or less.

Claim 6 (Currently Amended): A method of cleaning a heat treatment apparatus ~~that deposits including a treatment vessel having therein quartz structures that are exposed to a deposited BSG film by means of TEOS on an object to be processed contained in [[a]] the treatment vessel, the treatment vessel being~~ capable of forming a vacuum, the method comprising the step of:

~~cleaning the heat treatment apparatus by supplying a mixed gas of an HF gas and an NH₃ gas into the treatment vessel for while restraining damage to quartz material present in the quartz structures during said cleaning by limiting said cleaning to~~ a period of 0.6 minute or less.

Claim 7 (Previously Presented): The method of cleaning a heat treatment apparatus according to claim 3, wherein

 during the cleaning step, a supply amount of the HF gas is equal to or more than a supply amount of the NH₃ gas.